



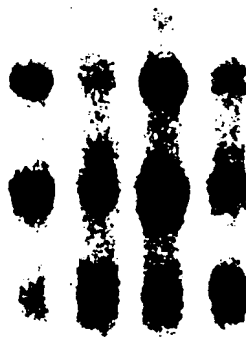
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T N T N

C →



D4-1 →



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FIG.1



1 cttcaaaagtt ccccgcatga aaattactta aacgttgcac acaacgtttc agaaaatctt
61 ttgtgaaaga agaaaaggaa attcagtggt tgagtctcag caggagttaa gctaatgcag
121 cttaaaaata tgccgaaaaa gaagcgttta tctgcgggca gagtgcccct gattctcttc
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241 gtacagcctc caaccatcac ccaacagctt ccaaaagatt acattattga ccctcgggag
301 aatattgtta tccagtggtg agccaaaggg aaaccgcccc caagcttttc ctggaccagt
361 aatgggactc attttgacat cgataaagac cctctgggtc ccatgaagcc tggcacagga
421 acgtctcataa ttaacatcat gagcgaaggg aaagctgaga cctatgaagg agtctatcag
481 tglacagcaa ggaacgaacg cggagctgca gtttcttaata acattgttgt ccgccatcc
541 agatcaccat tgtggacca aaaaaaactt gaaccaatca cacttcaaaag tggtcagtct
601 ttagtacttc cctgcagacc cccaatttga ttaccaccac ctataatatt ttggatggat
661 aattccittc aaagacttcc acaaaagtgg agagtttctc aaggtttgaa tggggacctt
721 tattttttcca atgtctctcc agaggacacc cgcgaagact atatctgtta tgcctagattt
781 aatcatactc aaaccataca gcagaagcaa cctatttctg tgaaggtgat ttcagtggat
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1081 aaaaccttgc agatcattca tgtttcagaa gcagactctg gaattacca atgtatagca
1141 aaaaatgcat taggagccat ccaccatacc atttctgtta gagttaagc ggctccatcc
1201 tggatcacag cccctcaaaa tcttgtgtctg tcccaggag aggatgggac ctgtatctgc
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1501 ctctaccagg tcattgcaaa caggcctgct ttactagact gtgccttctt tgggtctcct
1561 ctcccaacca tgcagtggtt taaggagct aaagggaagt ctcttcatga agatatttat
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1681 cctgtggccc aaaggacag tacaggaact tatacgtgtg ttgcaaggaa taaattaggg
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1801 gtgtcctttg aatgcaaaat gaacatgat cacaccttat ccttactgtt cctgtggctg
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2161 gaatatgaag atgcaatgca caagccaggg ctgtggcacc accaaactga agtttcttga
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2341 gcctcagaac cagataaaaa cccacagct gtggaaggac tgggatcaga gcctgataat
2401 ttggagattt cgtggaaagg cttgaatggg ttcgaaatca atgggcccag ccttcagtac
2461 aaagttagct ggcgccagaa agatggatgat gatgaatgga catctgttgt tgtggcaaat

FIG.2A



2521 gtatccaaat atattgtctc aggcacgcca acctttgttc catacctgat caaagttcag
2581 gccctgaatg acatgggggt tggcccccag ccagctgtag tcatgggaca ttctggogaa
2641 gacctcccaa tgggtggctcc tgggaacgtg cgtgtgaatg tggatgaacag taccttagcc
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2761 atttactatt ggaagaccca gagttcatct aaaagaaaca gacgtcacat tgagaaaaag
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3001 ccaacactgg actctctcac ttltggaatgg gatccaccga gccaccgaa tggcattttg
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3181 cgotataagt ttatattcta tgcacaaaca tcagcaggat caggaagtca aattacagag
3241 gaagcagtaa caactgtgga tgaagctggg attcttccac ctgatgtagg tgcaggcaaa
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4081 tcttgtttgt cagccctctc atactatgaa catatgggta gagagtatat ttcc

FIG. 2A (CONT')



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

Applicants: Gerald P. Murphy *et al.*

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PCRPPIGLPPPIIFWMDNSFQRLQSERVSQGLNGDLYFSNVLPEDTREDYICYARFN
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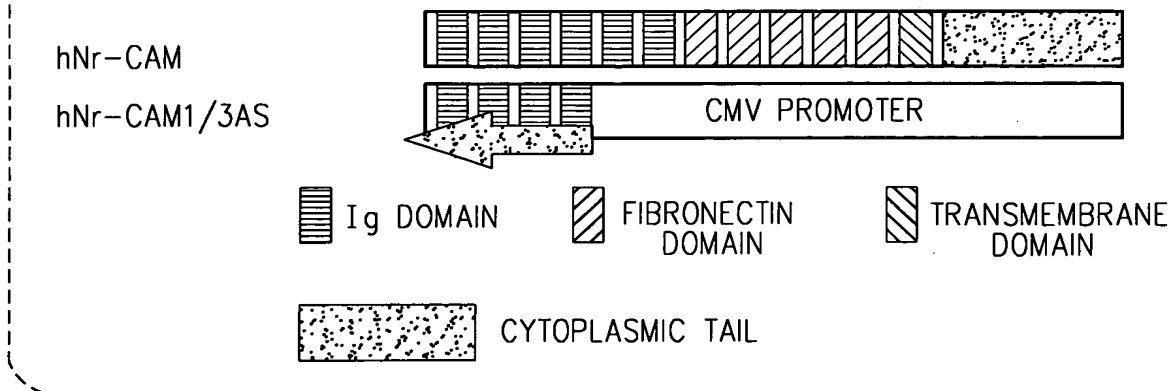
FIG. 2B



FIG. 2C

HUMAN Nr-CAM	4097	TCTCATACTATGAACATATGGGTAGAGAGTATATTTTC	4134
D4-1	1	***** TCTCATACTATGAACATATGGGTAGAGAGTATATTTTCTGCTGT	44
		***** ** ** ***** **	
RAT Nr-CAM	3713	TCTCATACTATGGACATATGGGTAGAAAGAATGTTTTCTGCGGT	3757
D4-1	45	ATGTTAGTATTATGAGAATAGTTACAGCAAAAACATAACTCAGT	88
		** * ***** ** ** * * * * * **	
RAT Nr-CAM	3758	ATATGAGTATTATAAGAACAGAGCAAGAACATAACTCAGTCAGT	3801
D4-1	89	CAAAGTATATGTTAATATGAACTGGAATGCAAAAGTGCATACTT	132
		** * *** ***** ** * * *	
RAT Nr-CAM	3802	CAGATGATACGTTAATATGAACTGGGGTGAAAAGG	3836
D4-1	133	TTTCATTCAAAATGGGTATTCTTGATTTCCTAAAAAAAAAAAAA	176

FIG. 2D





Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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FIG.3A



FIG.3B



FIG.3C



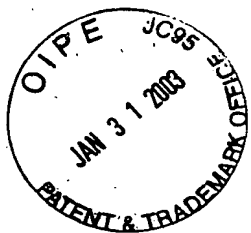
FIG.3D



FIG.3E



FIG.3F



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIA STIC USES
FOR TUMORS

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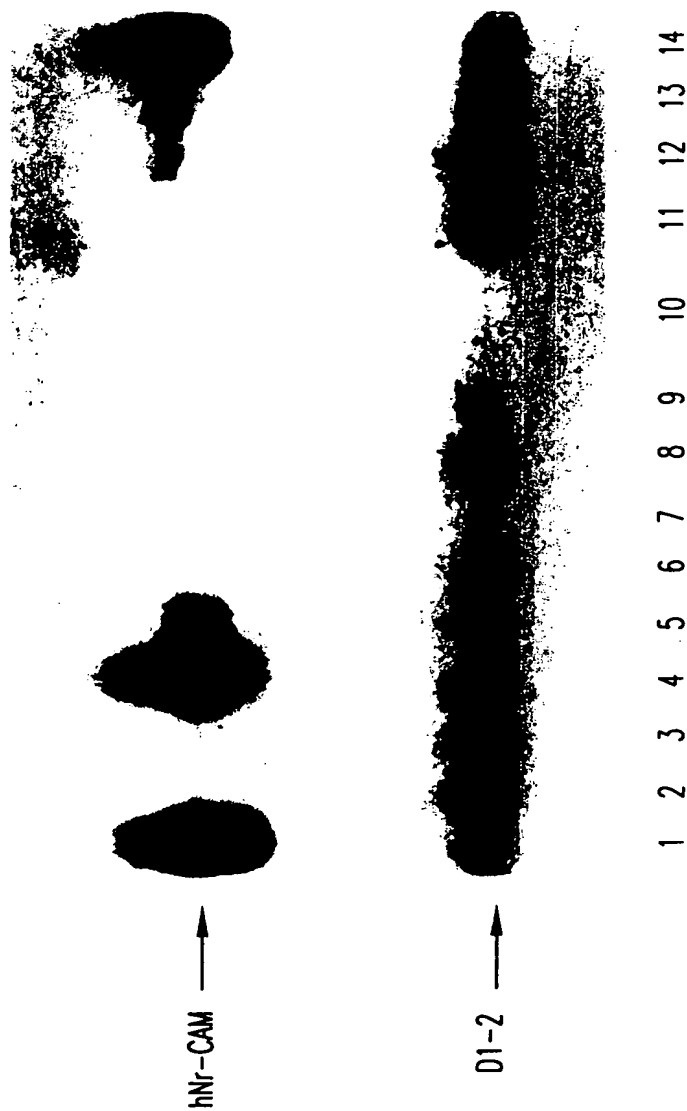


FIG.4A

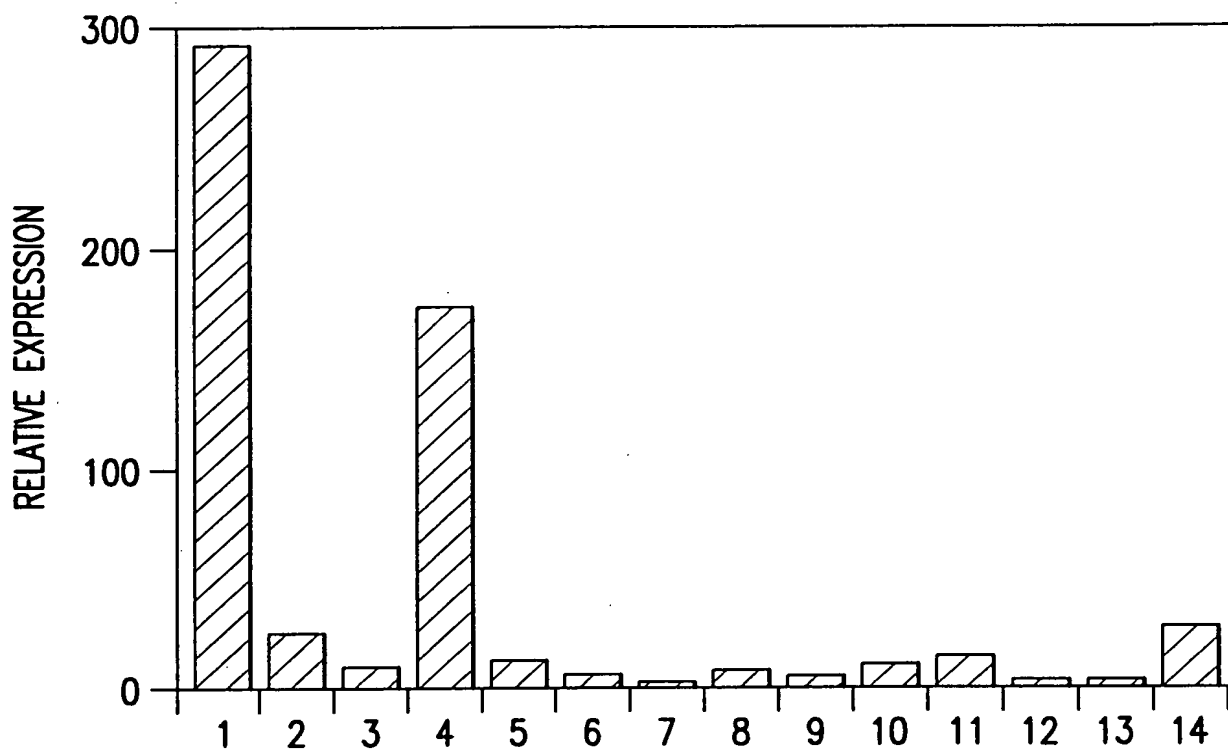


FIG.4B



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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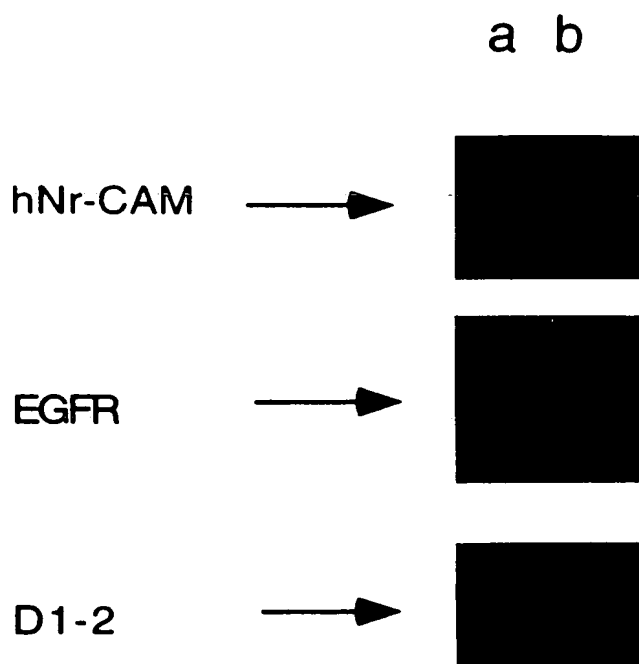


FIG.5A



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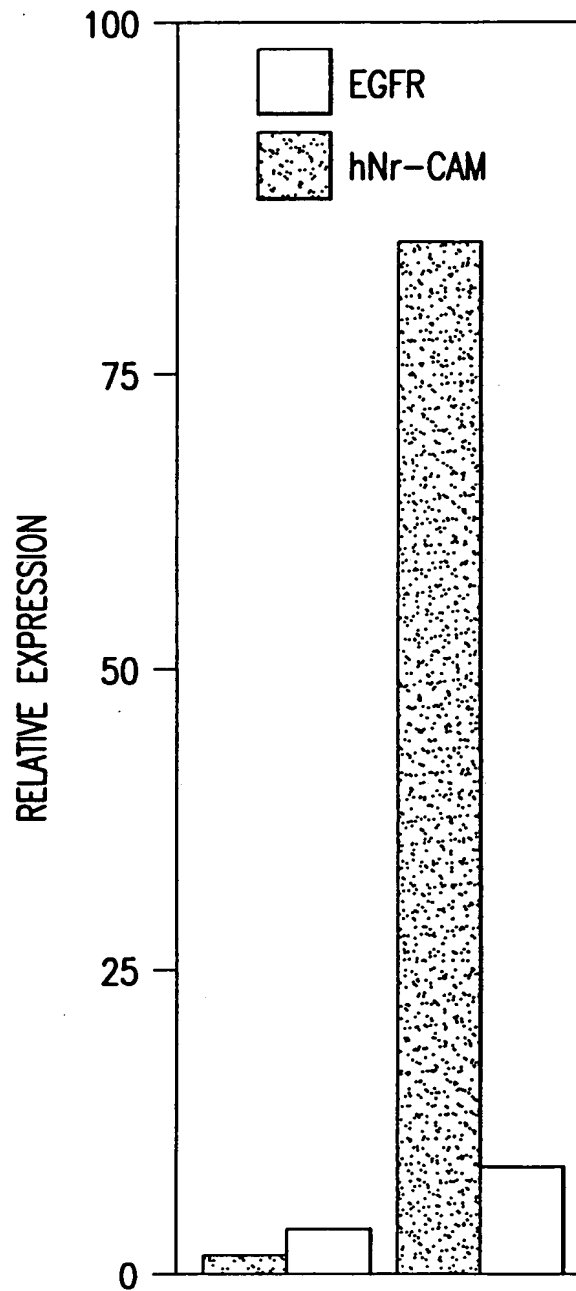


FIG.5B



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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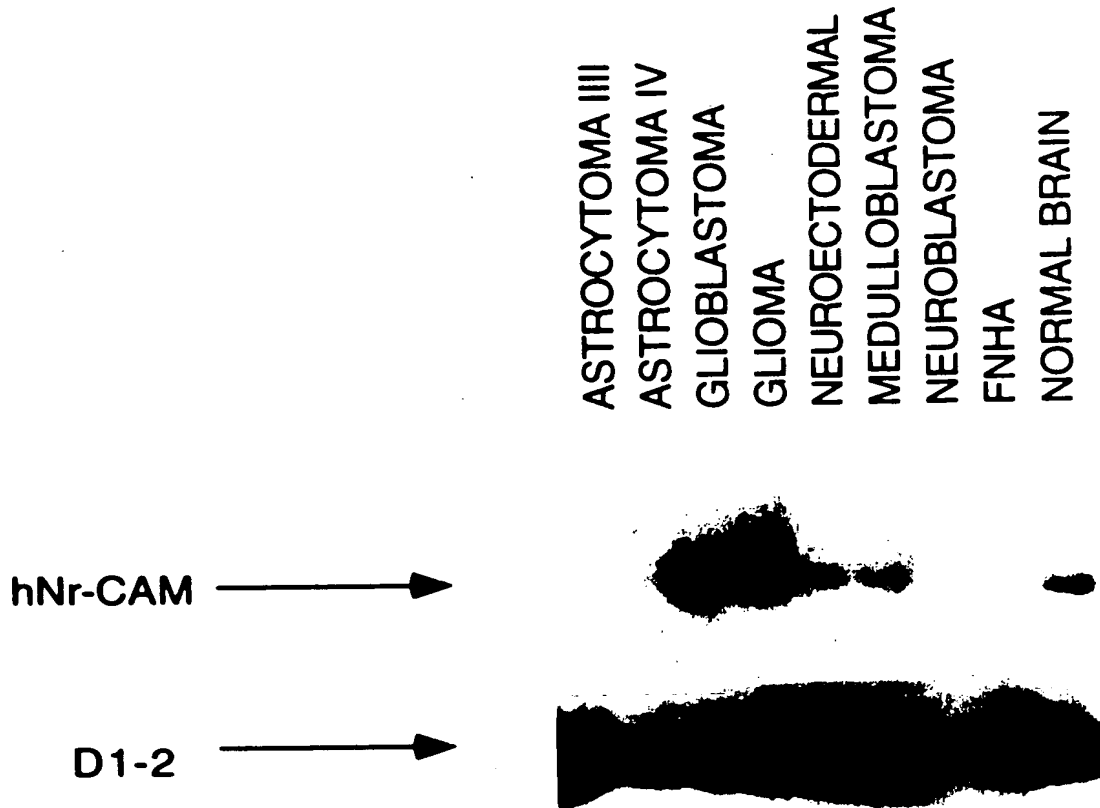


FIG.6A

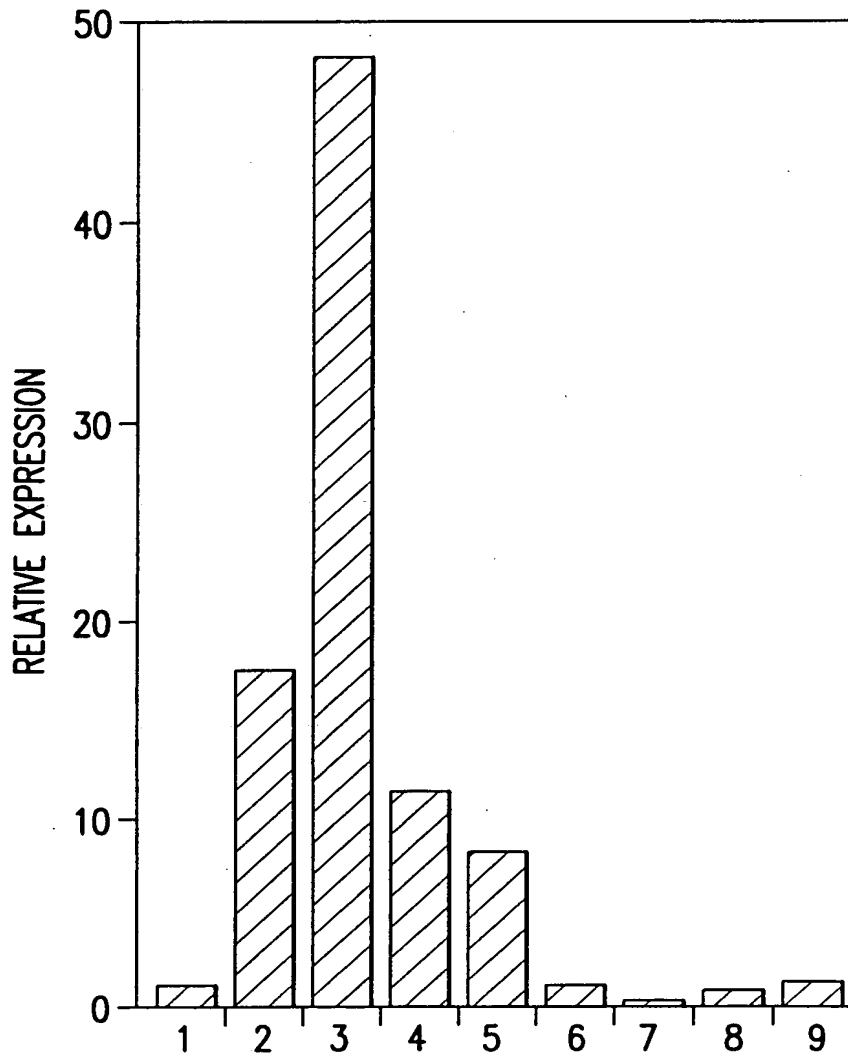
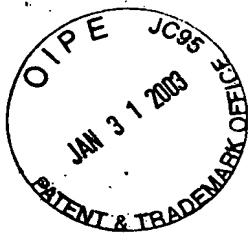


FIG.6B



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
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CEREBELLUM
CEREBRAL CORTEX
MEDULLA
SPINAL CORD
OCCIPITAL POLE
FRONTAL LOBE
TEMPORAL LOBE
PUTAMEN

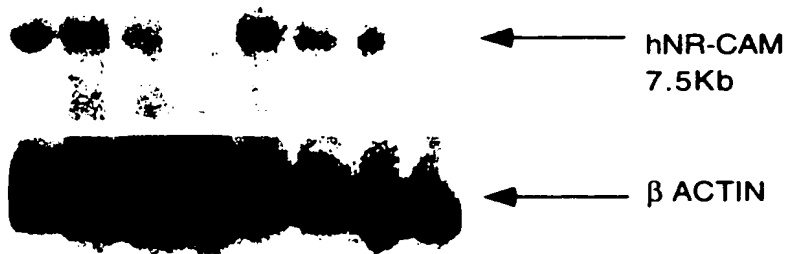
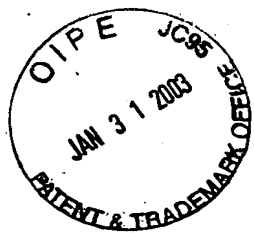


FIG.7A



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
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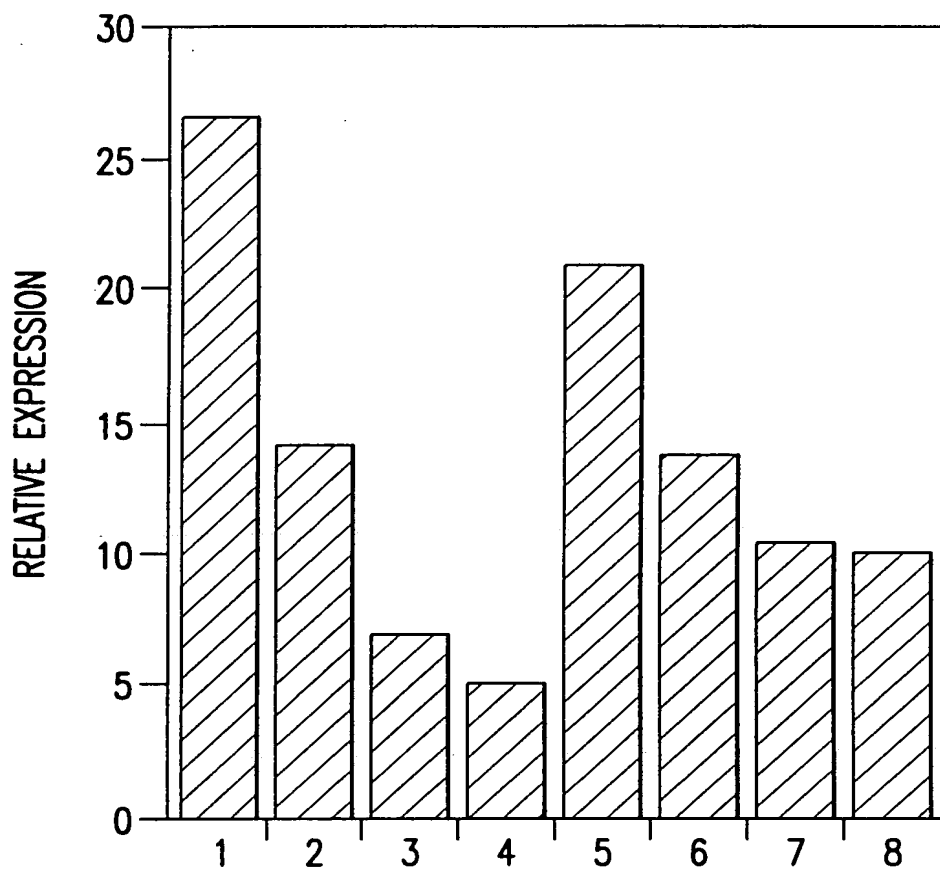


FIG.7B

TITLE NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
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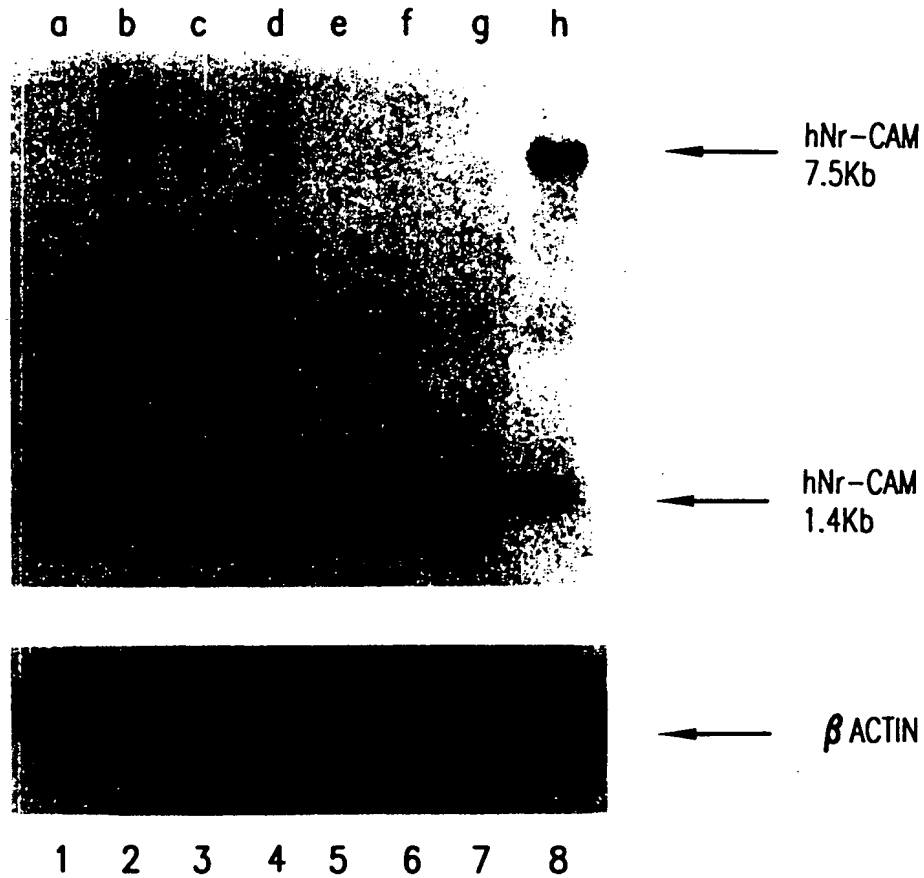
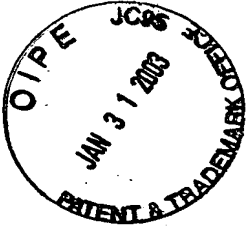
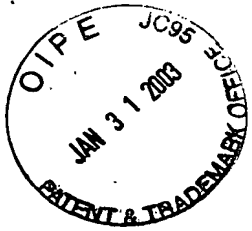


FIG.8A



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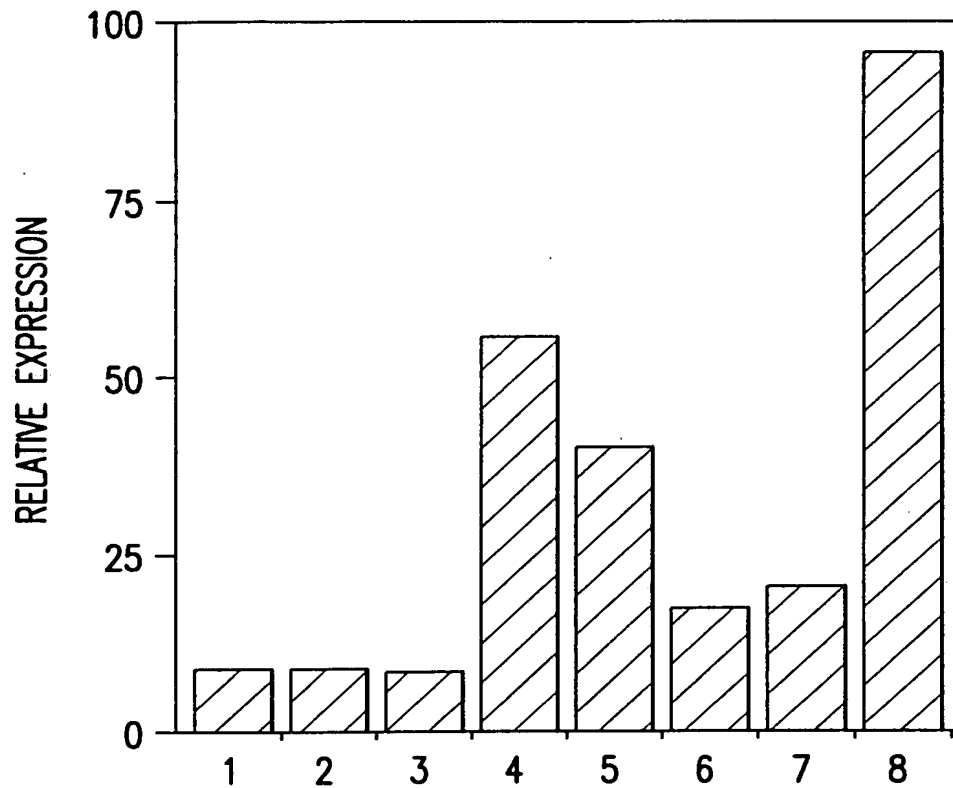


FIG.8B



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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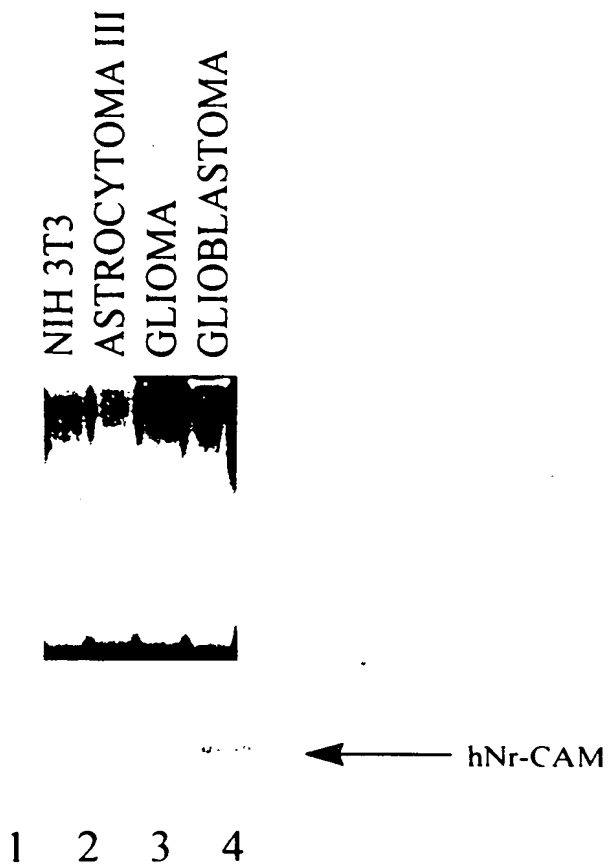


FIG.9



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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FIG.10A

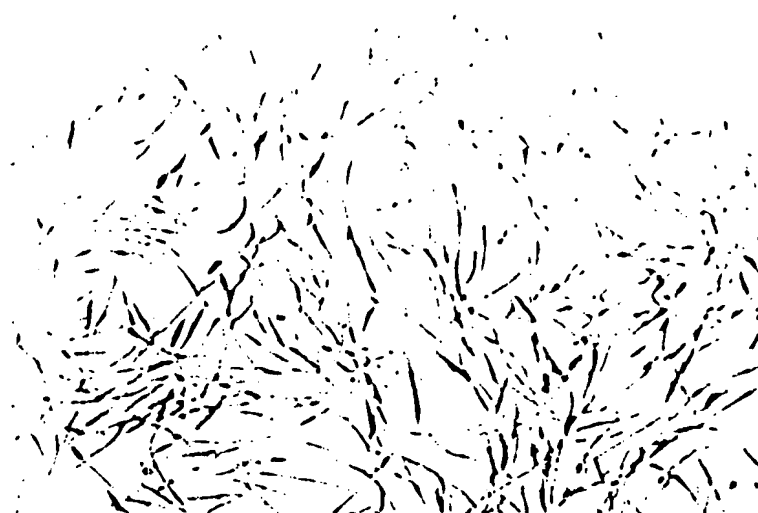
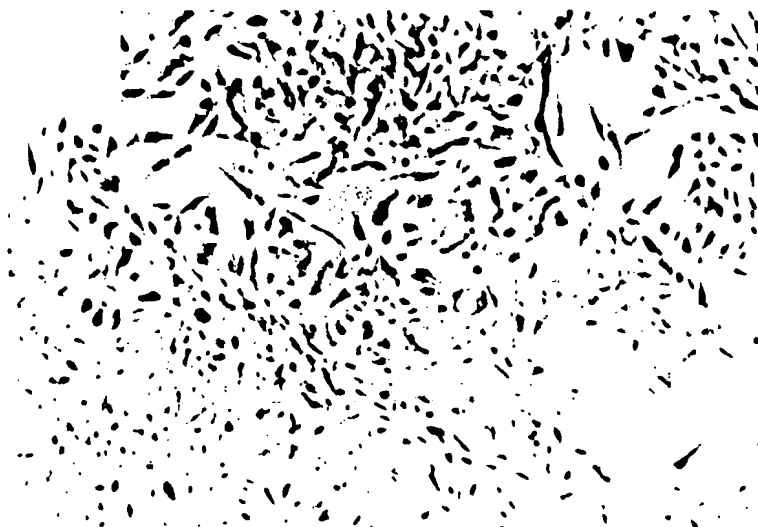


FIG.10B

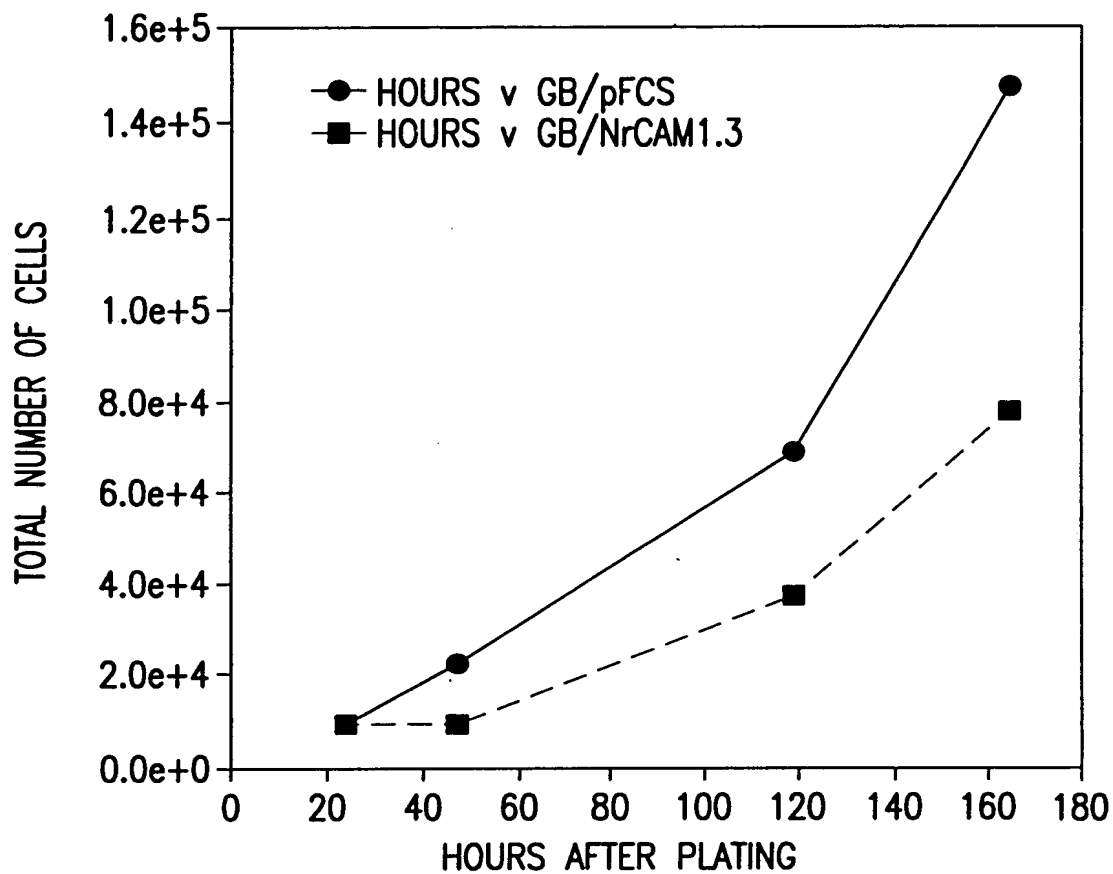


FIG.11

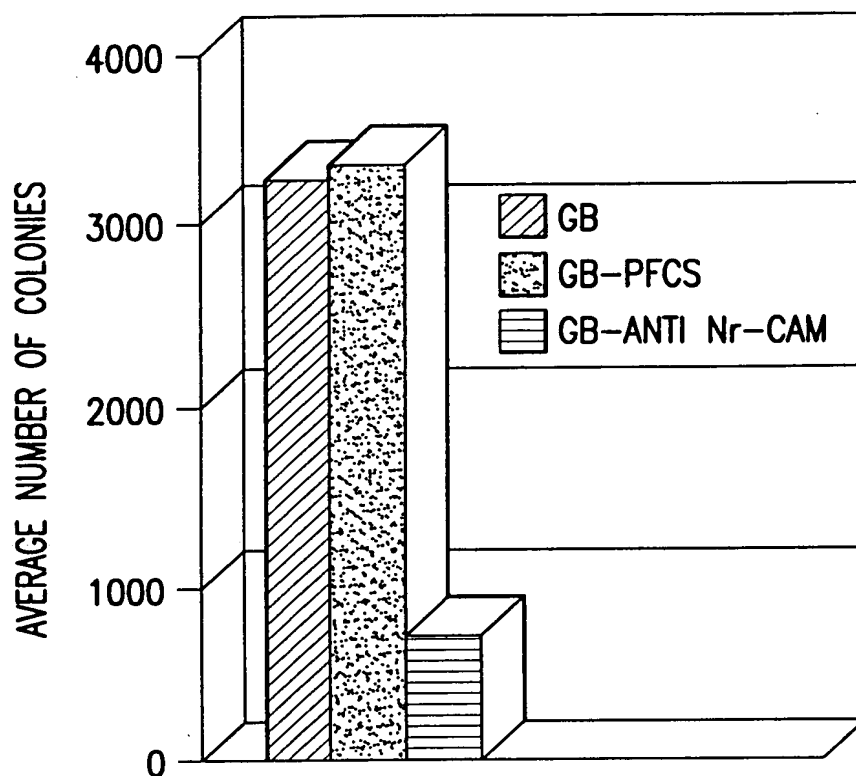


FIG.12



Title: hNr-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

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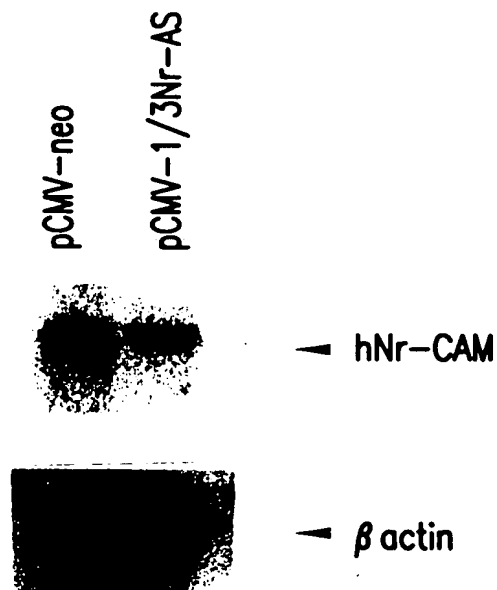


FIG.13

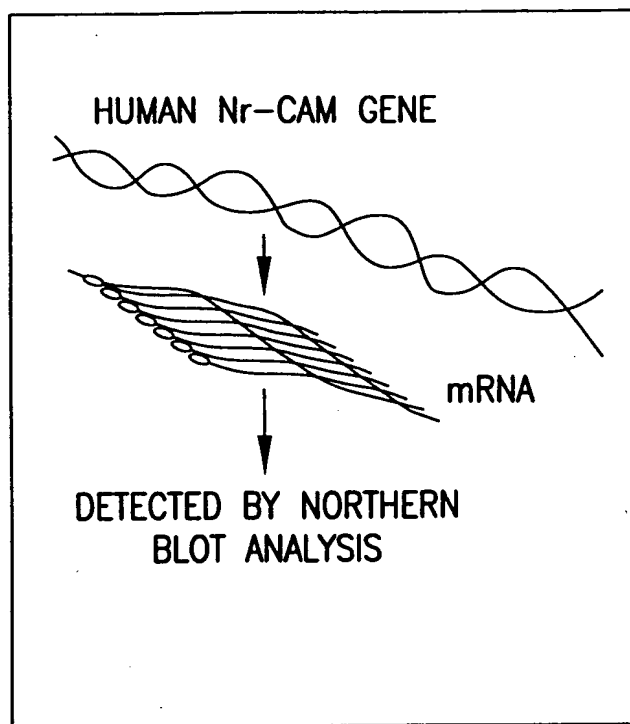


FIG.14A

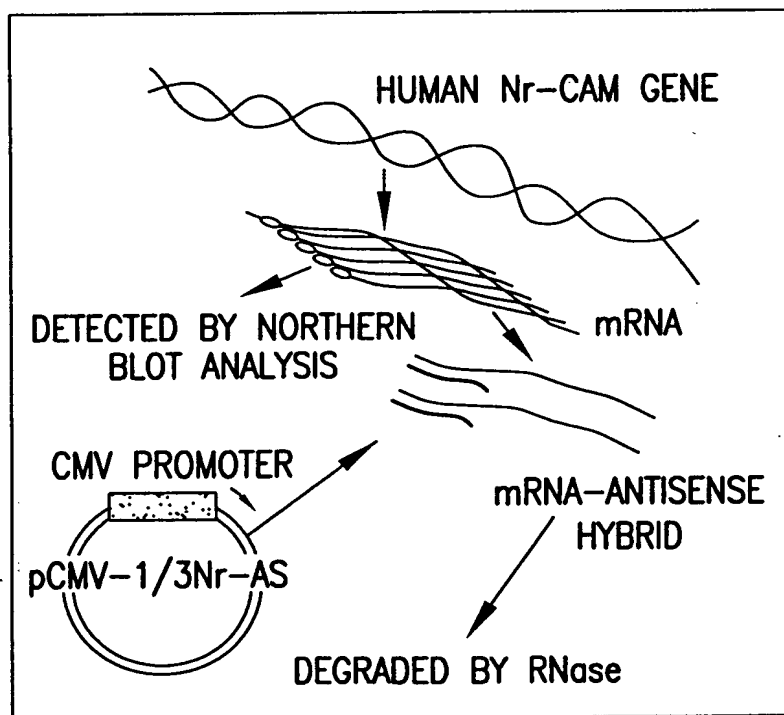


FIG.14B

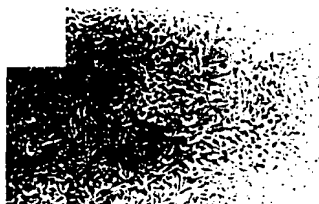


FIG. 15A



FIG. 15B



FIG. 15C



FIG. 15D



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
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FIG.16A



FIG.16B

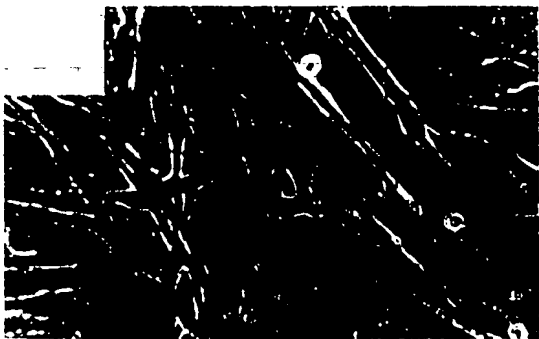


FIG.16C



FIG.16D

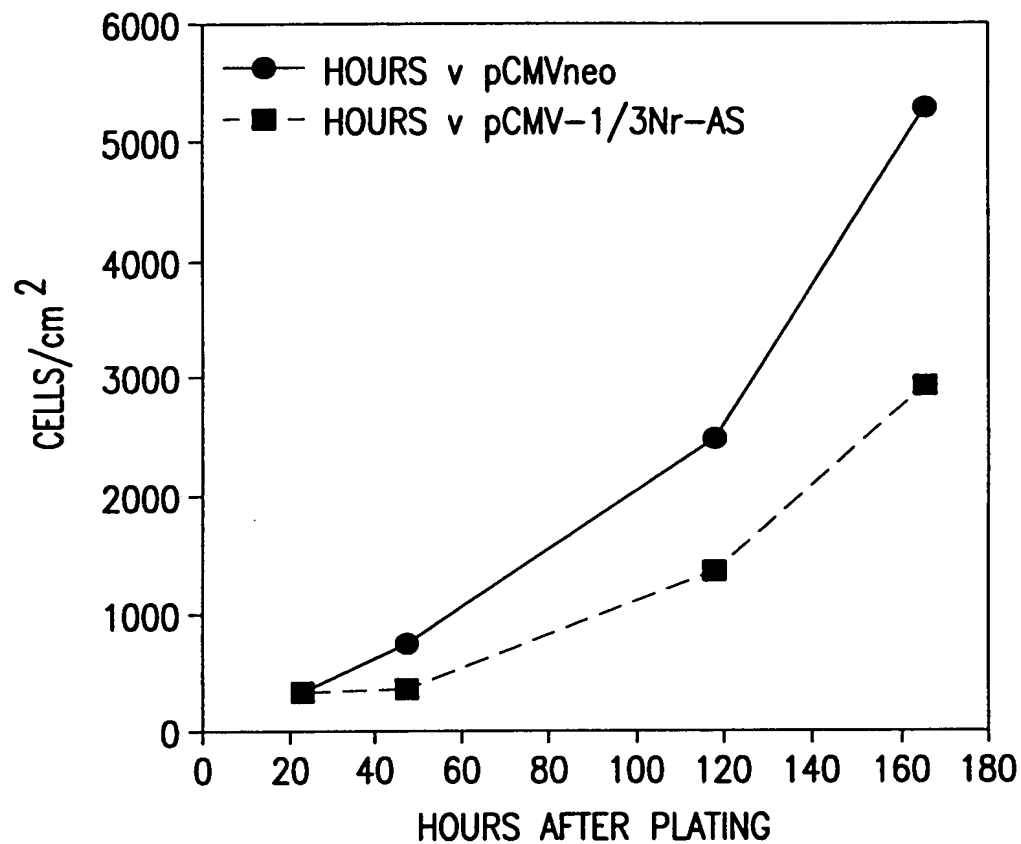


FIG.17



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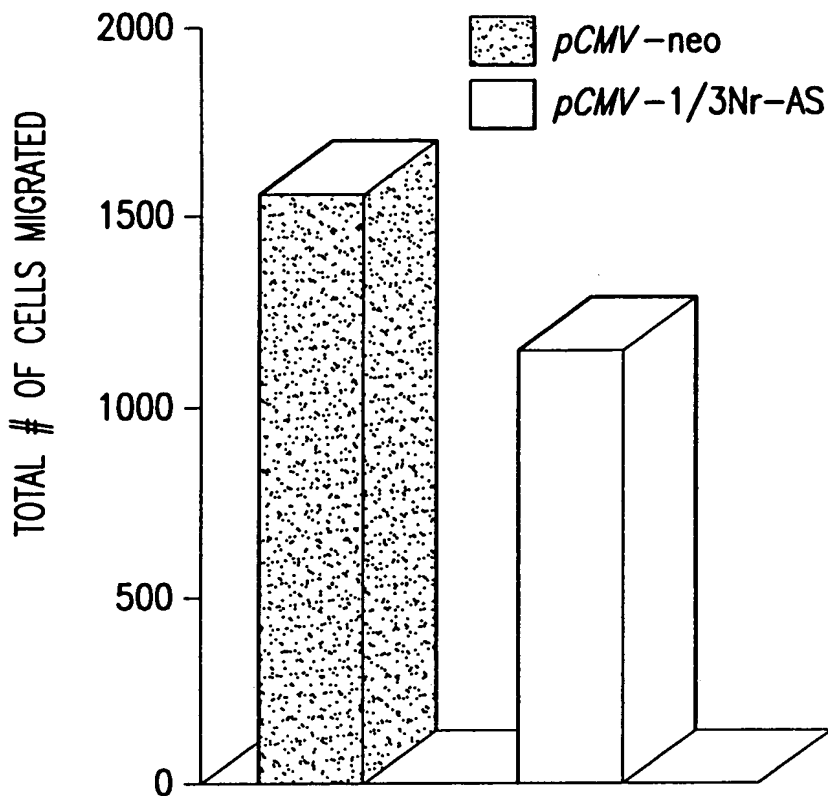


FIG.18

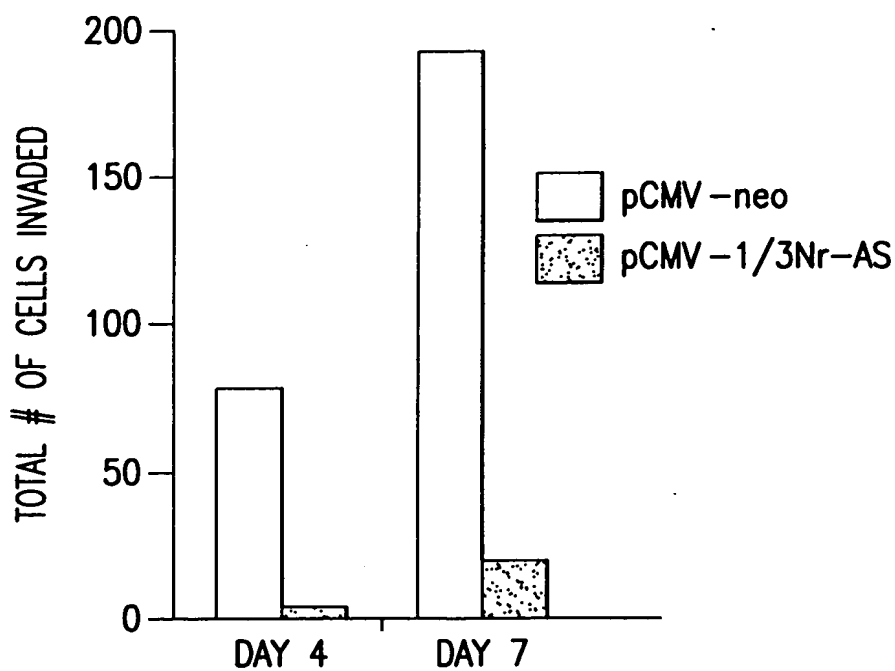


FIG.19



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FIG.20A

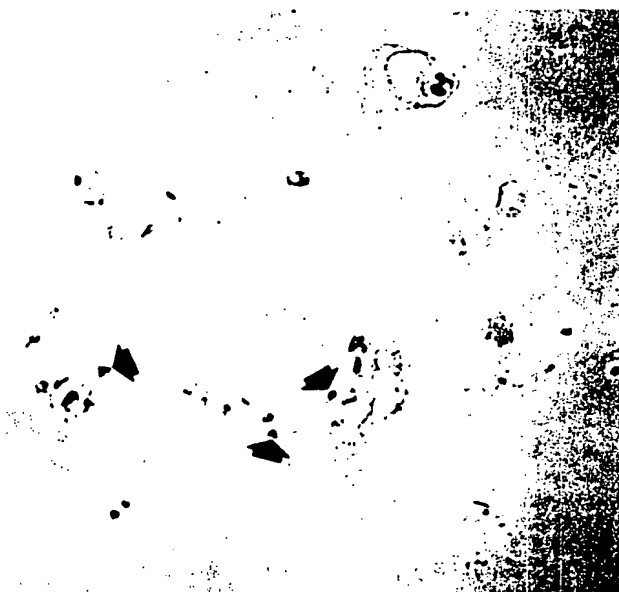


FIG.20B

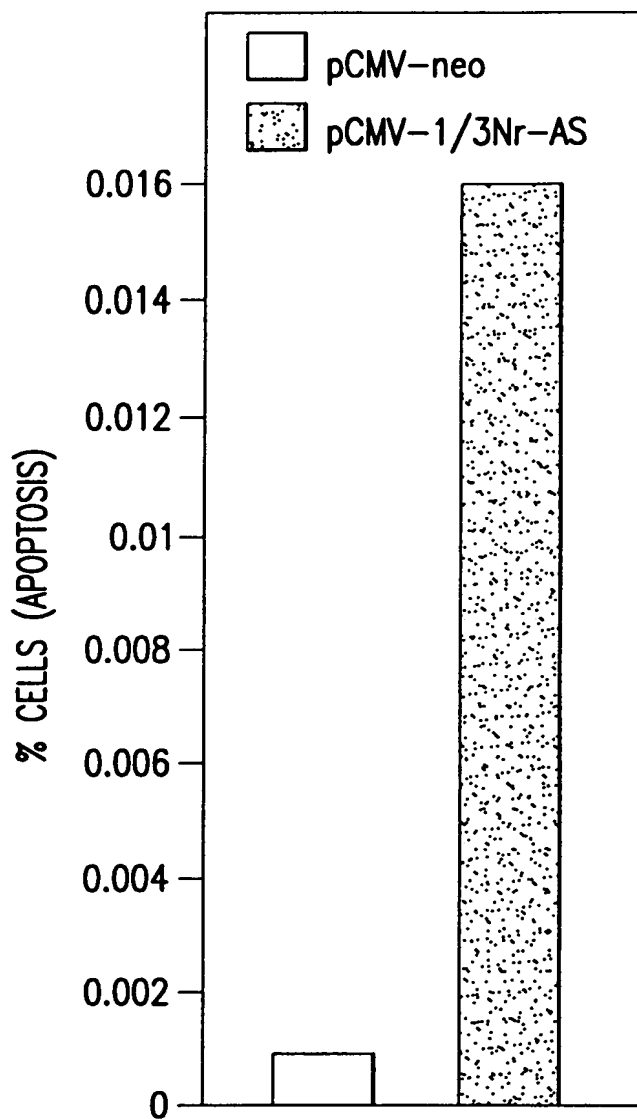


FIG.20C



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
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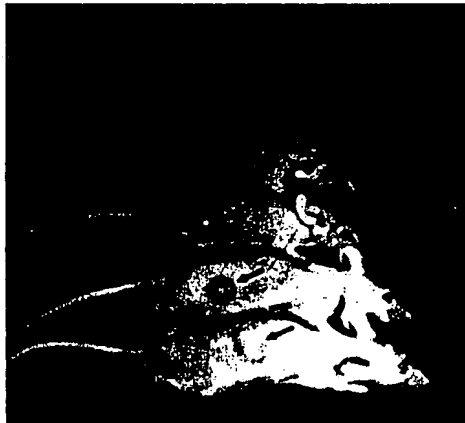


FIG.21



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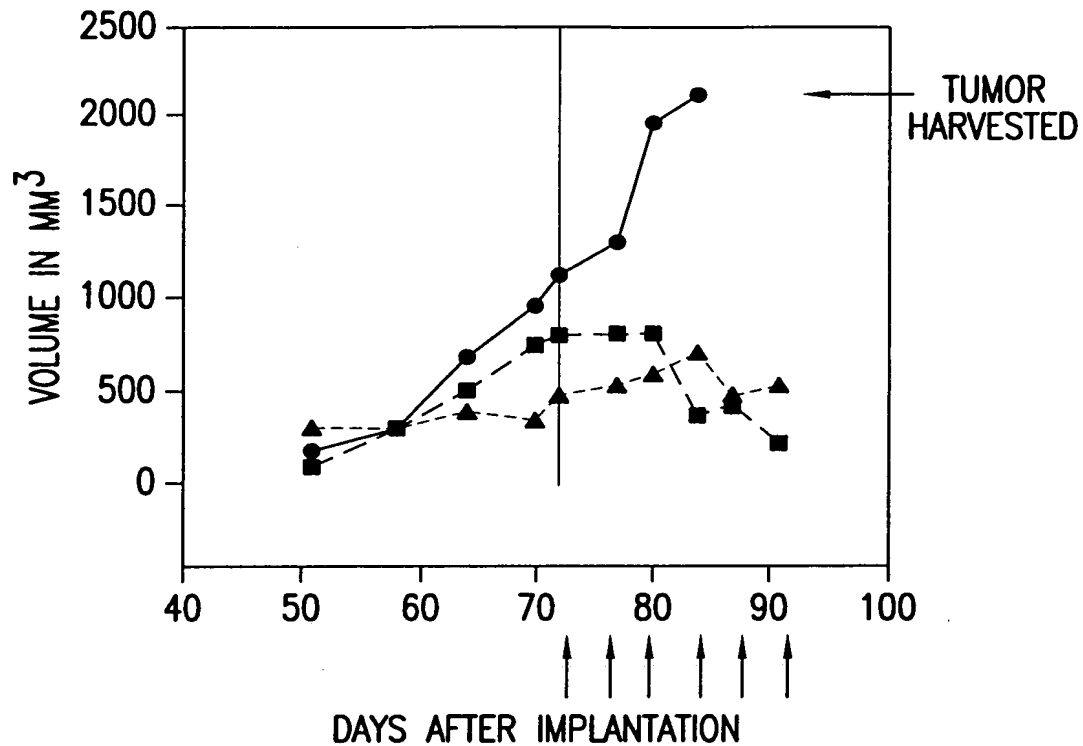


FIG.22A

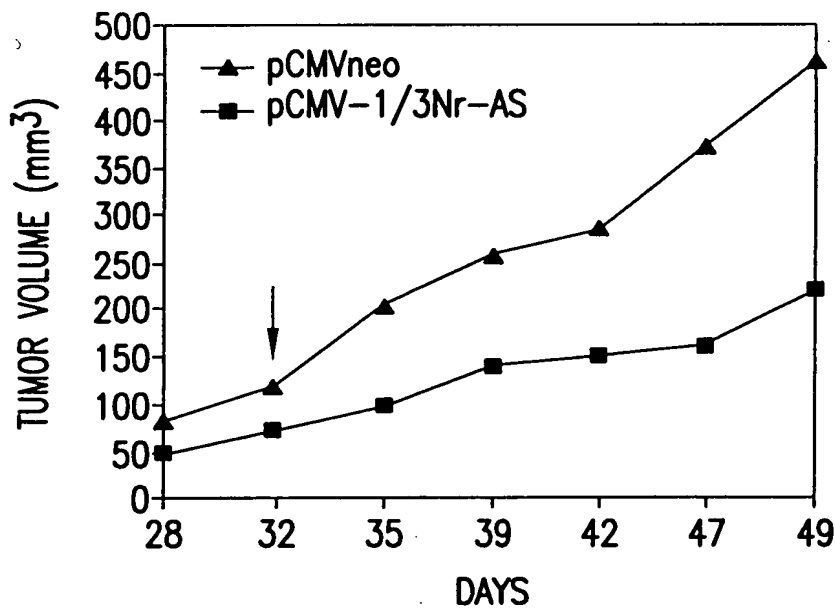


FIG.22B



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Average # of colonies (1×10^5)

FIG.23A



Average # of colonies (1×10^5)

FIG.23B



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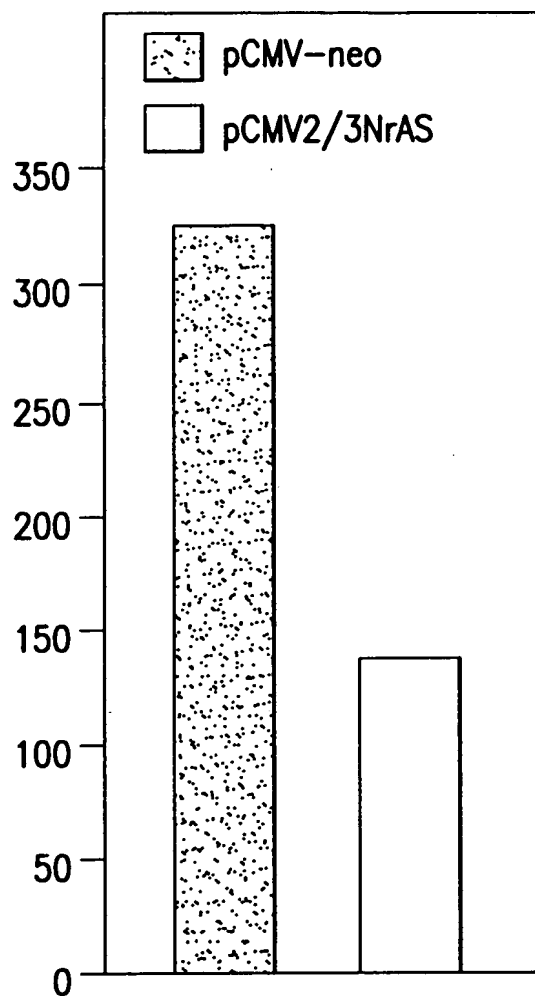


FIG.23C

Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES FOR TUMORS



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
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Human Nr-CAM: 721 GACACTATAGCTGCTAATTTGAGTGACACTGAGTTTATGGTGCTAAATCAAGTAGAGAG 780
|||||
Rat Nr-CAM: 739 GACACTATAGCTGCTAATTTGAGTGACACTGAGTTTATGGTGCTAAATCTAGTAAAGAG 798
|||||
Human Nr-CAM: 781 AGGCCACCAACATTTTAACTCCAGAAGGCAATGCAAGTAACAAAGAGGAATTAAGAGGA 840
|||||
Rat Nr-CAM: 799 AGGCCACCAACATTTCTAACTCCAGAGGGCAATGAAAGTCACAAGGAAGAATTAAGAGGA 858
|||||
Human Nr-CAM: 841 AATGTGCTTTCACTGGAGTGCAATTGCAGAAGGACTGCCTACCCCAATTATTTACTGGGCA 900
|| |||||
Rat Nr-CAM: 859 AACGTGCTTTCCCTGGAGTGCAATTGCAGAAGGCTACCTACTCCAGTTATTTACTGGATC 918
|||||
Human Nr-CAM: 901 AAGGAAGATGGAATGCTACCCAAAACAGGACAGTTTATAAGAACTTTGAGAAAACCTTG 960
|||||
Rat Nr-CAM: 919 AAGGAAGATGGAACGCTTCCTGTCAACCGGACGTTTATCGGAACTTTAAGAAAACCTTG 978
|||||
Human Nr-CAM: 961 CAGATCATTCATGTTTCAGAAGCAGACTCTGGAAATTACCAATGTATAGCAAAAAATGCA 1020
|||||
Rat Nr-CAM: 979 CAGATCATTCATGTCTCTGAAGCAGACTCTGGAAATTATCAGTGCATAGCAAAAAACGCA 1038
|||||
Human Nr-CAM: 1021 TTAGGAGCCATCCACCATAACCATTTCTGTTAGAGTTAAAGCGGCTCCACTACTGGATCACA 1080
|| |||||
Rat Nr-CAM: 1039 TTGGGAGCCGTCCATCATACCATTTCTGTACAGTTAAAGCGGCTCCCTACTGGATTGTT 1098
|||||
Human Nr-CAM: 1081 GCCCCTCAAATCTTGTGCTGTCCCCAGGAGAGGATGGGACCTTGATCTGCAGAGCTAAT 1140
|| |||||
Rat Nr-CAM: 1099 GCACCTCACAACCTCGTGCTTTCCCCAGGGGAGAATGGGACCCTCATCTGCAGAGCTAAC 1158
|||||
Human Nr-CAM: 1141 GGCAACCCCAAACCCAGAATTAGCTGGTTAAACAAATGGAGTCCCAATAGAAATTGCCCT 1200
|||||
Rat Nr-CAM: 1159 GGCAACCCCAAACCCAGAATTAGCTGGTTAAACAAATGGAGTCCCAGTAGAAATTGCTCTC 1218
|||||
Human Nr-CAM: 1201 GATGACCCCGAGCAAAAAATAGATGGCGATACCATTATTTTTTCAAATGTTCAAGAAAGA 1260
|||||
Rat Nr-CAM: 1219 GATGACCCCGAGCCGAAAAATCGATGGTGATACCATTATGTTTTCAAATGTTCAAGAAAGC 1278
|||||
Human Nr-CAM: 1261 TCAAGTGCAGTATATCAGTGCAATGCCTCTAATGAATATGGATATTTACTGGCAAACGCA 1320
|||||
Rat Nr-CAM: 1279 TCAAGTGCAGTTTATCAGTGCAATGCCTCTAACAAATATGGATATTTACTAGCAAATGCA 1338
|||||
Human Nr-CAM: 1321 TTTGTAAATGTGCTGGCTGAGCCACCACGAATCCTCACACCTGCAAACACA 1371
|||||
Rat Nr-CAM: 1339 TTTGTAAATGTGCTCGCTGAACCACCTCGGATTCTTACCTCAGCAAACACA 1389
|||||

FIG. 24A (CONT')



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PACKAGING CELL
(PRODUCES VIRAL PROTEINS FROM
STABLY INTEGRATED GENES)

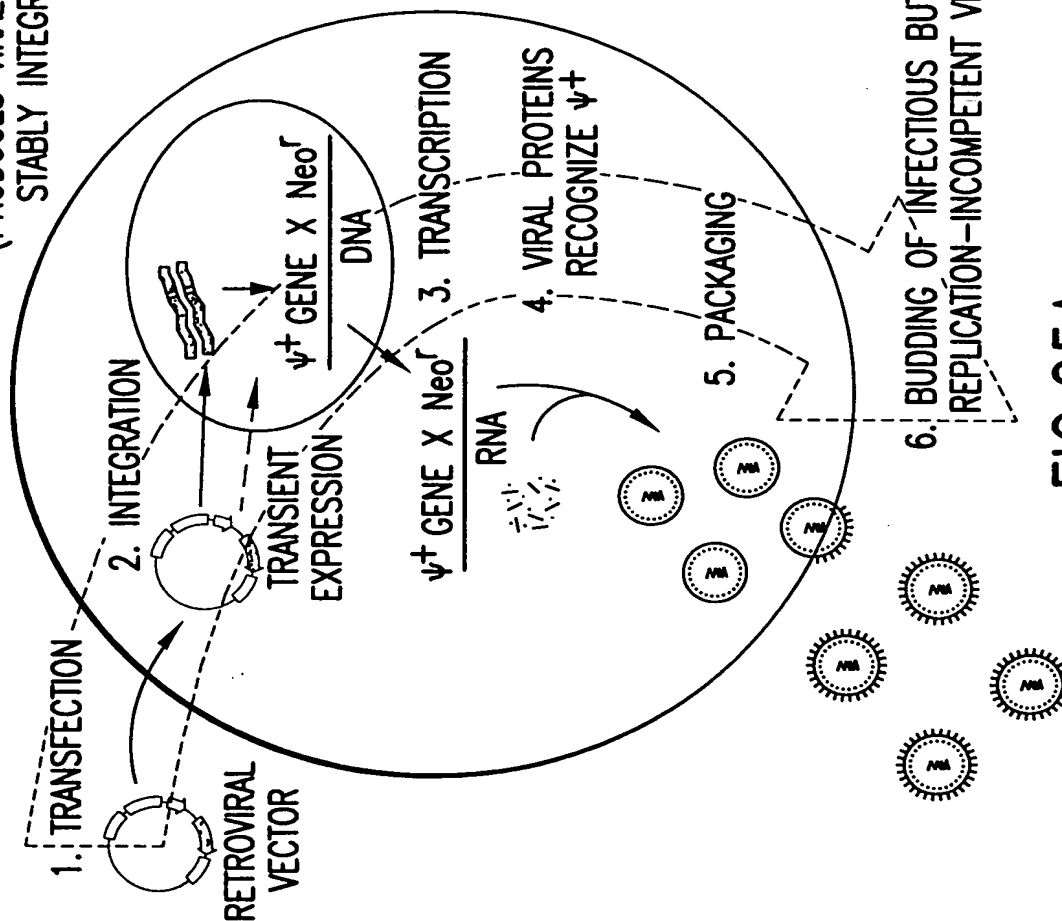


FIG.25A

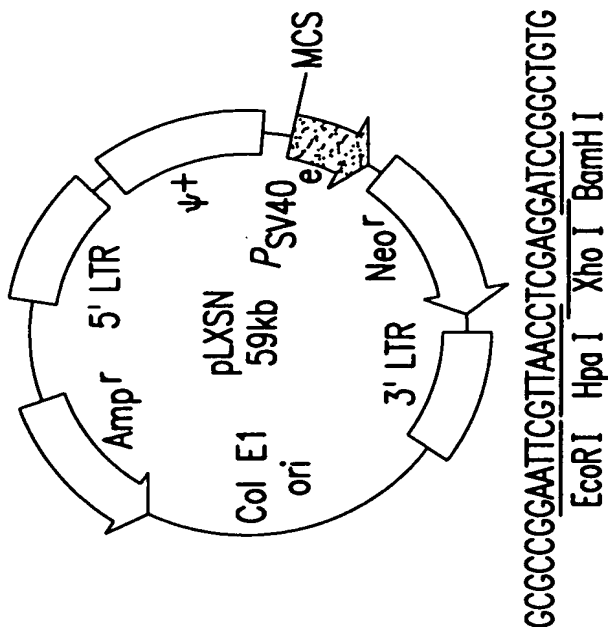


FIG.25B



Title: NR-CAM GENE, NUCLEIC ACIDS AND NUCLEIC ACID
PRODUCTS FOR THERAPEUTIC AND DIAGNOSTIC USES
FOR TUMORS

Applicants: Gerald P. Murphy *et al.*
Appl. No.: 09/301,380

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pCMV-1/3Nr-AS

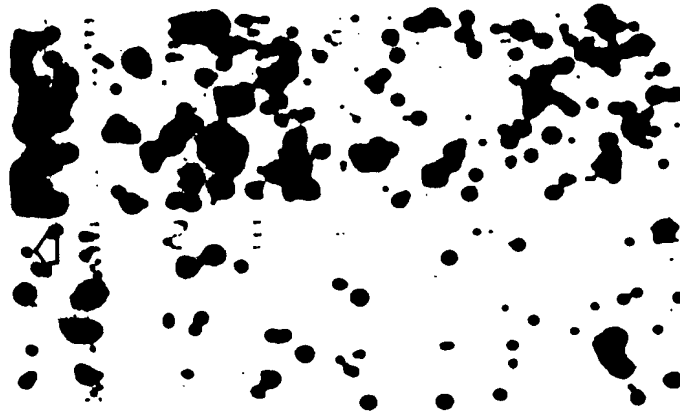


FIG.26A

pCMV-neo

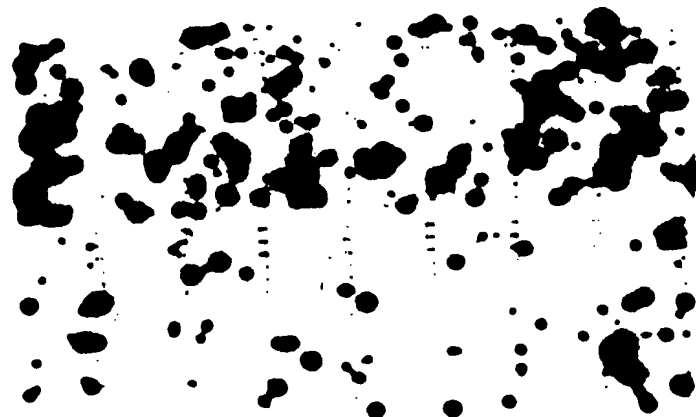


FIG.26B